

**Claim Rejections – 35 USC 112**

Claims 1, 17, 23, 26, and 49 are rejected as being indefinite due to the language of "excess of amounts" of metal salts. Claims 2, 17, 27, and 43 are rejected as being indefinite due to the use of parentheticals. Claim 5 is rejected as it fails to further limit the claim from which it depends. Those Claims have been amended to overcome these rejections.

**Claim Rejections – 35 USC 102 & 103****Guo et al.**

Claims 1-5, 17-18, 26-30, and 43-44 stand rejected under 35 U.S.C. §102(e) as being unpatentable over Guo et al., U.S. Patent No. 6,713,539.

Claims 6-16, 19-25, and 31-42 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Guo et al., U.S. 6,713,539.

The Examiner is correct in his characterization that Guo et al. teach storage-stable modified asphalt composition and production thereof, using: base asphalt 50-97.7 parts by weight; a polymer having double bonds 2.0-20.0 parts by weight; a compatibilizer 0.1-20.0 parts by weight; a certain cross-linking reagent 0.1-10.0 parts by weight, and an organic polar compound 0.1-10.0 parts by weight, where the softening point difference of its product determined by the stability test is lower than 2.5 °C.

Guo teaches that: "The addition of the cross-linking reagent during the mixing of the asphalt/polymer mother liquor permits the polymer in a good dispersion state to *carry out the linking reaction with the organic polar compound in asphalt.*" (Emphasis added; See Col. 7, lines 7-10). Guo also teaches: "The function of adding organic polar compounds in the present system is to promote the reaction of the cross-linking reagent." (See Col. 7, lines 57-59).

In contrast, Applicants teach that a concentration of metal salts such as Zinc Oxide in about 0.05 wt% up to about 5 wt% are along are sufficient to increase the compatibility of an asphalt and polymer composition to acceptable standards, without using the organic polar compound as taught in Guo et al. to increase compatibility.

Also, while comparative Example 1 in Table 3 shows the preparation of asphalt without the use of a polar solvent, it teaches the use of a polysulfide – namely cycloheptathiaimine alkylphenol (see Col. 3, lines 63-65; Col. 9, lines 21-40) with SBS (styrene-butadiene-styrene three-block copolymer); that formulation was found to be unstable – and therefore unsuitable. Moreover, Applicants' invention does not require the use of polysulfides.

In summary, there is no teaching in Guo of producing asphalt by heating a mixture of asphalt and an elastomeric polymer and adding up to 5 weight % of a metal salt (a “symbolizing” sulfur-donating cross-linking reagent), without the use of a polar solvent. Therefore, even in view of Guo, Applicants' invention is novel and unobvious.

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This is intended as a full and complete response to the Office Action dated December 12, 2005, having a shortened statutory period for response set to expire on March 12, 2006.

The newly amended claims are believed to be patentable; having addressed all issues set out in the Office Action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request the same.

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Respectfully submitted,

  
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